

## Chugai, OMRON, and OMRON SINIC X Begin Testing of Flexible and Highly Human-Friendly Lab Automation System at Chugai Life Science Park Yokohama

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Chugai Pharmaceutical Co., Ltd.

OMRON Corporation

OMRON SINIC X Corporation

[Chugai Pharmaceutical Co., Ltd.](#) (Headquarters: Chuo-ku, Tokyo; President and CEO: Dr. Osamu Okuda; hereinafter, “Chugai”), [OMRON Corporation](#) (Headquarters: Shimogyo-Ku, Kyoto, Japan; President and CEO: Junta Tsujinaga; hereinafter, “OMRON”) and [OMRON SINIC X Corporation](#) (Headquarters: Bunkyo-ku, Tokyo; President and CEO: Masaki Suwa; hereinafter, “OSX”) are working together on the automation of research processes to improve the productivity of drug discovery research, raise the quality of experimental data, and enable new experimental activities. These three parties have been conducting joint research toward the realization of a flexible lab automation system with a higher degree of freedom, more versatility, and greater human compatibility than existing systems, and they are now embarking on verification testing of the system at Chugai’s new research center, Chugai Life Science Park Yokohama.

Building on the parties’ respective strengths and shared vision for the future, the joint research to date has aimed to create a flexible and highly human-friendly lab automation system that will allow drug discovery researchers to conduct more creative experiments. In contrast to the difficulties encountered in handling numerous and diverse devices and apparatus used by researchers in existing systems, this joint project deploys OMRON’s Sensing & Control + Think technology designed in line with OMRON’s goal of “empowering people through automation” to build a lab automation system optimized for Chugai’s drug discovery research. This robotic system automates experiments with complex operations and has the flexibility to continue performing drug discovery research operations even in the absence of human technicians. The verification tests involve installing the system in Chugai Life Science Park Yokohama to establish and trial basic drug discovery research operations such as transportation of lab samples and operation control of equipment by mobile robots, and the use of dual arm robots to operate a variety of experimental tools. This new system has the potential to enable drug discovery experiments to continue even overnight when the lab is unstaffed, and leave humans with more time to spend on creative activities.

Through this verification testing, Chugai is looking to advance automation incorporating robotic technologies and AI-assisted drug discovery at its center for new drug discovery research, thereby achieving dramatic gains in the productivity and quality of research. OMRON and OSX will be using the technologies created through this joint research to accelerate their efforts to solve social issues by “empowering people through automation” in each of OMRON’s focal domains.

Representatives of each of the companies made the following statements.

- Dr. Osamu Okuda, President and CEO, Chugai Pharmaceutical Co., Ltd.

We have been engaged in advanced joint research with OMRON and OSX as partners in developing a next-generation lab automation system utilizing robotics, combining each company’s respective fields of expertise. By automating complex experiments that to date could only be performed by humans, and enabling drug discovery experiments to be continued even at night, on holidays, and other times when researchers cannot be in the lab, we’ll be able to achieve even greater efficiency and improvement of research productivity. At the same time, we’re aiming to use Chugai’s next-generation lab automation system to create an environment where researchers can work in a high productive manner. We’re committed to continuing these verification tests at Chugai Life Science Park Yokohama which will serve as a new drug discovery engine, generating innovation that makes effective use of leading-edge robotic systems, and striving to achieve the goals set in our growth strategy, TOP I 2030: “Double R&D output” and “Launch global in-house products every year.”

- Junta Tsujinaga, President and CEO, OMRON Corporation

This joint research with Chugai is a highly significant and major challenge for our company in the context of advancing our core technology development and continuing to create “Innovation Driven by Social Needs” in accordance with the OMRON Principles. The outcomes of this research will add significant value to the social issues we are tackling under our Long-Term Vision SF2030: “extension of healthy life expectancies” and “realization of a digital society.” We’ll be working with Chugai to establish the next generation of lab automation and enable new innovations in drug discovery research.

- Masaki Suwa, President and CEO, OMRON SINIC X Corporation

Since our establishment in 2018, OSX has been pursuing open innovation under research themes set through near-future design and backcasting. The current research project originated from an inquiry we received from Chugai in response to a news about technical

competitions <sup>\*1</sup> regarding our research on robots that could be used widely in high-mix low-volume manufacturing. I'm delighted that our mutual admiration—for OSX and OMRON's vision for robots and Chugai's approach to drug discovery research—has led to such major advancements toward real-life application of our technology. We'll continue to challenge ourselves to create revolutionary technologies that take a human-centered approach to enhancing the relationship between humans and machines.

\*1: <https://www.omron.com/jp/ja/news/2021/09/c0928.html> (Aichi World Robot Summit 2020: OMRON team places third in assembly challenge and takes out and takes out Japanese Society for Artificial Intelligence Prize)

### **Chugai Pharmaceutical Co., Ltd.**

Chugai Pharmaceutical Co., Ltd., headquartered in Tokyo, is a research-based pharmaceutical company with world-class drug discovery capabilities, including proprietary antibody engineering technologies. Chugai is committed to creating innovative pharmaceutical products that may satisfy unmet medical needs. Chugai is listed on the Prime Market of the Tokyo Stock Exchange. While maintaining autonomy and management independence, Chugai is an important member of the Roche Group. Additional information is available at <https://www.chugai-pharm.co.jp/english/>

### **OMRON Corporation**

OMRON Corporation is a global leader in the field of automation based on its core technology of "Sensing & Control + Think." OMRON's business fields cover a broad spectrum, ranging from industrial automation and electronic components to social systems, and healthcare. Established in 1933, OMRON has about 30,000 employees worldwide, working to provide products and services in around 120 countries and regions. For more information, visit OMRON's website: <https://www.omron.com/global/en/>

### **OMRON SINIC X Corporation**

OMRON SINIC X Corporation is the strategic hub of OMRON's near-future design vision. It is home to researchers with top-level expertise in the latest technologies across a wide range of fields including AI, robotics, IoT, and sensing. In order to address social issues, the company seeks to "design the near future" by integrating business models, technology strategy, and IP strategy in a platform of technological innovation, and applying it in the concrete architecture of business. For more details, please visit: <https://www.omron.com/sinicx/en/>

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